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ABSTRACT

The Austin (Texas) Independent School District has been researching the dropout issue for several years and has studied the implementation of the mandated Texas at-risk criteria to identify at-risk students. Having identified students at risk, the district followed them for 4 years (1987-88 to 1990-91) to determine the accuracy of the initial identification. The following types of information were obtained: (1) enrollment status; (2) age; (3) grade; (4) ethnicity; (5) number of Fs; (6) achievement test scores; and (7) dropout rates at several time points. The results show that state mandated criteria identify many students who will not drop out. While over 40 percent of the secondary school students were considered at-risk in each of the 4 years, in a given year about one of eight at-risk students actually dropped out. A small proportion (3.4 to 5.3 percent) of students not identified dropped out each year; one-third of dropouts were not identified by the state criteria. The number-one predictive factor is being older than average for the grade. Of 22 categories of risk, the combination of being overage and failing the Texas Assessment of Minimum Academic Skills, the state exit examination, accounted for the highest percentage of dropouts. The number of overage students earning Fs and falling off-pace for graduation has increased in each of the 4 years, as has the number of dropouts. Statistical data are provided in 16 figures and 2 tables in 2 attachments. Eight references are listed. (SLD)

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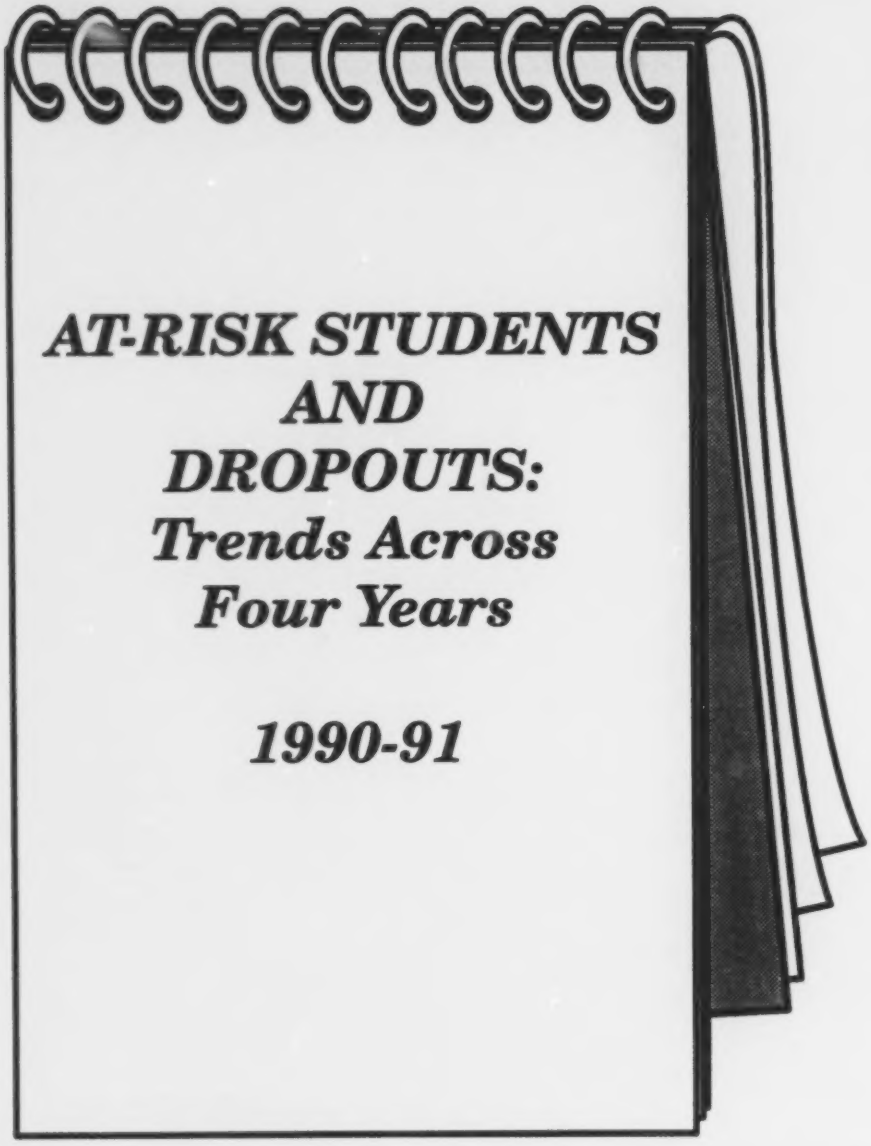

AT-RISK STUDENTS AND DROPOUTS: Trends Across Four Years

1990-91

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AT-RISK STUDENTS AND DROPOUTS: TRENDS ACROSS FOUR YEARS

Austin Independent School District
Department of Management Information
Office of Research and Evaluation

Executive Summary

Author: Linda Frazer

Background

The Austin Independent School District's (AISD) Office of Research and Evaluation (ORE) has been researching the dropout issue for several years and has studied the implementation of the mandated Texas at-risk criteria to identify at-risk students. Having identified the students, we have followed them for four years to determine how accurate that initial identification was.

The objectives of this report are to provide information for local decision makers and to contribute to national research by providing information on one aspect of the dropout problem from an urban Texas school district perspective.

This study focused on the classification and follow-up of students enrolled in 1987-88, 1988-89, 1989-90, and 1990-91 who were in grades 7-12. Enrollment status, age, grade, ethnicity, number of F's, achievement test scores, and dropout rates at several points in time were obtained from the extensive computer files maintained by the District.

The combination of at-risk criteria most associated with dropping out in 1990-91 are:

(1) Age, F's, TEAMS
(2) Age and TEAMS
(3) Age and F's
(4) Age
(5) Age, Ach, F's, and TEAMS
(6) Age, Ach, and TEAMS
(7) Age and Ach

See page 4 for more information.

A copy of the full report for which this is the Executive Summary is available as Publication Number 90.43 from:
Austin Independent School District
Office of Research and Evaluation
1111 West 6th Street
Austin, Texas 78703

Major Findings

- State-mandated criteria identify many students as at risk who will not drop out.
- Over 40% of the secondary students were considered at risk for each of the last four years: 44.3% (1987-88), 46.1% (1988-89), 41.4% (1989-90), and 44.3% (1990-91). (p. 2)
- In a given year, about 1 out of 8 at-risk students drops out: 12.1% (1987-88), 11.5% (1988-89), 13.5% (1989-90, and 12.7% (1990-91). (pp. 6-7)
- A small proportion of not-at-risk students drops out each year: 5.3%, 4.1%, 3.5%, 3.4% for the years 1987-88 to 1990-91, respectively. (p. 7)
- One third of dropouts were not identified by the State-mandated criteria as being at risk. (pp. 5-7)
- To better pinpoint differential dropout rates, the District extended the State at-risk criteria resulting in 22 at-risk categories which has enabled us to identify students with the highest dropout probabilities. (p. 2)
- Being older than average for a grade level is the number one overall factor for predicting dropping out. (p. 2)
- Of the 22 categories the combination of being overage and failing TEAMS, has accounted for the highest percentage of dropouts over the last four years. (p. 20)
- Of high school students in this category (Age, TEAMS), 70.4% dropped out the year they were identified. (p. 11)
- At-risk high school students identified as at risk because of failing TEAMS Writing Composition were the least likely (10.3%) of any group of at-risk students to have dropped out after four years. (p. 9)
- The number of overage high school students earning F's and falling off pace towards graduation has increased each of the last four years. The percent of these students dropping out has also increased each year. (p. 9)

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INTRODUCTION

National attention has been drawn to the increasing problem of dropouts and of students at risk of dropping out. Numerous community and school programs have been designed and implemented to stem the flow of these students' exiting the school prior to graduation. Despite the best efforts of all involved in the numerous programs that have been implemented, students continue to drop out.

There is a need for information on whether we are correctly identifying the students who are at risk of dropping out. Clearly, we want to know whether the students who are most at risk are being served by our dropout prevention programs. Our schools need to know who is at risk and why in order to meet their needs.

The Austin Independent School District's (AISD) Office of Research and Evaluation (ORE) has been researching the dropout issue for several years and has studied the implementation of the mandated Texas at-risk criteria to identify at-risk students. Having identified the students, we have followed them for four years to determine how accurate that initial identification was.

OBJECTIVE

The objectives of this report are to provide information for local decision makers and to contribute to national research by providing information on one aspect of the dropout problem from an urban Texas school district perspective. There are four parts to the main objective:

- Describe the Texas mandated at-risk criteria and the local district operationalization of those criteria.
- Discuss a three- and a four-year follow-up of the 1987-88 at-risk students.
- Share findings about the use of at-risk criteria, so other local systems can better focus their at-risk identification procedures.
- Discuss possible ways that such criteria could become more effective.

PERSPECTIVE

Like every other school district in the country, our urban, Texas district is concerned with the large percentage of our students who drop out of school. In the past year, 1989-90, 1,748 students (10.0%) in grades 9-12 dropped out. In the most recent ninth-grade cohort for which data are available (first-time ninth graders of 1986-87), 25.4% of the students dropped out before graduation.

By use of centrally maintained data files, ORE has for several years provided information to the schools for their use in assessing the at-risk status of their students. For the last four years, ORE has identified for the schools the at-risk students using the State criteria. This study focuses on the results of four years' experiences of using the State criteria to identify students at risk and those students who dropped out at the end of each school year.

The State-mandated criteria overidentify at-risk students. There are more students identified as at risk than the schools can effectively target. There are also students slipping through the cracks—dropping out—who were not identified as being at risk. There is a need to refine the criteria so that school staff can better focus energies on students who are going to drop out. There is also a need to identify students in a more timely fashion—before the ninth grade.

TEXAS AT-RISK CRITERIA

In 1986, the Texas Legislature approved House Bill 1010, one provision of which was a specification of criteria by which Texas schools would identify students at risk of dropping out and notify their parents. As a consequence of this educational reform legislation, Texas school districts had to operationalize and implement the mandate.

For purposes of identifying and tracking at-risk students, AISD operationalized the State criteria as follows:

FIGURE 1
LOCAL OPERATIONAL DEFINITIONS

State Criterion	Local Operational Definition
Not advanced from one grade level to the next for two or more school years	Two or more years older than expected for the grade level
Has mathematics or reading skills that are two or more years below grade level	Two or more years below grade level as measured by a norm-referenced achievement test
Has failed two or more courses in one or more semesters and is not expected to graduate within four years of the time the student entered the ninth grade	Has two or more F's in a semester
Has failed one or more of the reading, writing, or mathematics sections of the most recent TEAMS test beginning with the seventh grade	Has failed one or more of the Texas Educational of Assessment of Minimum Skills (TEAMS) Mathematics, Reading, or Writing tests, most recent score

To pinpoint differential dropout rates better, the District's Office of Research and Evaluation (ORE) extended the State at-risk criteria, resulting in 22 individual at-risk categories. See Figure 2 (H.B. 1010: The State At-Risk Criteria) for a full description of the Texas at-risk criteria and Figure 3 for a listing of the 22 categories.

METHODS

This study focused on the classification and follow-up of 25,587 students enrolled in 1987-88, 25,292 students enrolled in 1988-89, 25,998 students enrolled in 1989-90, and 25,468 students enrolled in 1990-91 who were in grades 7-12. Enrollment status, age, grade, ethnicity, number of F's, achievement test scores, and dropout rates at several points in time were obtained from the extensive computer files maintained by the District.

RESULTS

The following section describes the at-risk students for four years and highlights some of the results from the analyses of the end of year one for four different years. Results from the end of the first year as well as the second-, third-, and fourth- year follow-up will be discussed in this report.

How many students are at risk?

For grades 7-12, the number of students considered at risk by the State criteria was 11,330 (44.3%) in 1987-88, 11,668 (46.1%) in 1988-89, 10,759 (41.4%) in 1989-90, and 11,041 (44.3%) in 1990-91. These numbers represent almost half of the secondary students for each of the last four years.

Who are the students at risk?

For the last four years, a determination has been made of the at-risk status (as of October 30) of each student in grades 7-12. The most important findings are:

- The number of students considered at risk is 41-46% of the enrollment.
- High school students (56%) are more likely to be at risk than junior high school students (28-33%).

FIGURE 2
H.B. 1010: THE STATE AT-RISK CRITERIA

H.B. 1010, passed by the Texas State Legislature in 1986 and taking effect September 1, 1987, relates to reducing the number of students who drop out of public school. Section 4 (f) of this bill states:

For the purposes of this section, "student at risk of dropping out of school" includes each student in grade levels seven through 12 who is under 21 years of age and who:

(1) was not advanced from one grade level to the next two or more school years;

(2) has mathematics or reading skills that are two or more years below grade level;

(3) did not maintain an average equivalent to 70 on a scale of 100 in two or more courses during a semester, or is not maintaining such an average in two or more courses in the current semester, and is not expected to graduate within four years of the date the student begins the ninth grade; or

(4) did not perform satisfactorily on an assessment instrument administered under Section 21.551(a) of this code in the seventh, ninth, or twelfth grade.

Grades 7-12
19 TAC 75.195(c) (1) - (4)

Below 21 years of age and meet one or more of the following:

(1) has not been promoted one or more times in grades 1-6 based on academic criteria established in subsections (a) and (b) of this section and continues to be unable to master the essential elements in the 7th or higher grade level;

(2) is two or more years below grade level in reading or mathematics;

(3) has failed at least two courses in one or more semesters and is not expected to graduate within four years of the time the student entered the 9th grade; or

(4) has failed one or more of the reading, writing, or mathematics sections of the most recent TEAMS test beginning with the seventh grade.

Grades 7-12
TEC 21.557 (f)

Under 21 years of age and who:

(1) was not advanced from one grade level to the next two or more school years;

(2) has mathematics or reading skills that are two or more years below grade level;

(3) did not maintain an average equivalent to 70 on a scale of 100 in two or more courses in the current semester, and is not expected to graduate within four years of the date the student begins the ninth grade; or

(4) did not perform satisfactorily on an assessment instrument administered under Section 21.551(a) of this code in the seventh, ninth, or twelfth grade.

H.B. 1010 amended the Texas Education Code (TEC) guidelines which are contained in the Texas Administrative Code (TAC). Provisions in both the TEC and TAC must be implemented as law.

A student who meets one or more of these criteria shall be identified as at risk. A student does not have to meet all four criteria to be considered at risk.

Optional criteria for identifying at-risk students, grades 1-12, are also included as follows:

Grades 1-12
19 TAC 75.195 (c) (5)
Optional criteria:

* environmental factors,
* familial factors,
* economic factors,
* social factors,
* developmental factors,
* other psychosocial factors where such factor contributes to the students' inability to progress academically.

Grades 7-12
TEC 11.205 (c)
Optional criteria:

* adjudged delinquent;
* abuses drugs/alcohol;
* limited English proficiency
* receives compensatory or remedial instruction;
* sexually, physically, or psychologically abused;
* pregnant;
* slow learner;
* underachiever;
* enrolls late in school year;
* stops attending school before the end of the school year;
* unmotivated; or
* other characteristics that indicate the student is at high risk of dropping out.

FIGURE 3
Definitions of Risk Category Codes

Risk Category	Risk Factors	Definition
1	Age	Student is two or more years older than expected for the grade level
2	Read Ach	Student scored two or more years below grade level in reading on a norm-referenced, standardized achievement test (either the Iowa Tests of Basic Skills or the Tests of Achievement and Proficiency)
3	Math Ach	Student scored two or more years below grade level in mathematics on a norm-referenced, standardized achievement test (either the ITBS or the TAP)
4	2 F's	Student failed at least two courses during a semester
5	TEAMS Read	Student failed the reading section on the most recent administration of the state-mandated, criterion-referenced Texas Educational Assessment of Minimum Skills (TEAMS) (grades 7 and 9 only)
6	TEAMS Math	Student failed the mathematics section of the TEAMS
7	TEAMS Lang	Student failed the language arts section of the Exit-Level TEAMS (grades 11 and 12 only)
8	TEAMS WRITE	Student failed the writing section of the TEAMS (Grades 7 and 9 only)
9	TEAMS W COMP	Student failed only the writing composition portion of the TEAMS Writinig test (grades 7 and 9 only)
10	Age, Read Ach or Math Ach	Student is two or more years older than expected for the grade level and scored two or more years below grade level in reading or mathematics on the ITBS or TAP
11	Age, 2 F's	Student is two or more years older than expected for the grade level and failed at least two courses during a semester
12	Age, TEAMS (any)	Student is two or more years older than expected for the grade level and failed at least one of the sections of the TEAMS
13	Math Ach or Read Ach & 2 F's	Student scored two or more years below grade level in mathematics or reading on the ITBS or the TAP and failed at least two courses during a semester
14	Math Ach or Read Ach & TEAMS (any)	Student scored two or more years below grade level in mathematics or reading on the ITBS or the TAP and failed at least one of the sections of the TEAMS
15	2 F's, TEAMS (any)	Student failed at least two courses during a semester and failed at least one of the sections of the TEAMS
16	Age, Math Ach or Read Ach, & 2 F's	Student is two or more years older than expected for the grade level, scored two or more years below grade level in mathematics or reading on the ITBS or the TAP, and and failed at least two courses during a semester
17	Age, Math Ach or Read Ach, &TEAMS (any)	Student is two or more years older than expected for the grade level, socred two or more years below grade level in mathematics or reading on the ITBS or the TAP, and failed at least one of the sections of the TEAMS
18	Age, 2 F's, & TEAMS (any)	Student is two or more years older than expected for the grade level, failed at least one of the sections of the TEAMS
19	Age, Math Ach or Read Ach, 2 F's, & TEAMS (any)	Student is two or more years older than expected for the grade level, scored two or more years below grade level in mathematics or reading on the ITBS or the TAP, failed at least two courses during a semester, and failed at least one of the sections of the TEAMS
20	Math Ach & Reading Ach	Student scored two or more years below grade level in mathematics and in reading on the ITBS or the TAP
21	TEAMS (two)	Student failed at least two sections of the TEAMS
22	Math Ach or Read Ach, 2 F's, &TEAMS (any)	Student scored two or more years below grade level in mathematics or reading on the ITBS or the TAP, failed at least two courses during a semester, and failed at least one of the sections of the TEAMS

- A greater proportion of the Hispanic (54-60%) and Black (59-61%) enrollment is identified as at risk than American Indian (33-47%), Asian (34-40%), or White (25-31%).

- More males (46-51%) are at risk than females (37-41%).

For more information on the at-risk students in AISD see 1990-91 At-Risk Report (Publication No. 90.41).

End of Year One for Four Cohorts

What is the relationship between being at-risk and dropping out?

For grades 7-12, a total of 2,374 (9.3%) students dropped out by the end of the sixth six weeks of 1987-88. A total of 1,371 (57.7%) dropouts came from those considered at risk; 752 (31.7%) of the dropouts were not identified as at risk by the State criteria; 251 of the dropouts were not enrolled prior to October 30, 1987 and were not evaluated for at-risk status. New students who come to us without test scores or grades and who are not overage can not be identified as at risk by the State criteria.

In 1987-88, the dropouts represented 12.1% of the at-risk students. The majority (87.9%) of at-risk students did not drop out. Dropouts represented 5.3% of students not at risk. The most (94.7%) of not-at-risk students did not drop out. See Figure 4 Number and Percent of Dropouts, Grades 7-12 and Figure 5 Summary of Enrollment, At-Risk Students, and Dropouts.

In which risk categories are students ?

The number of students in each risk category, the number of dropouts from each category, and the percentage of dropouts from each category are displayed in Attachment 1 Dropouts as a Function of At-Risk Status. For 1987-88 and 1988-89, the percentages of dropouts for each category vary from as little as .09 (category 1) to as much as 6.94 (category 7). For the most part, the percentages differ very little. The categories are very consistent.

Are there high-risk categories?

The at-risk categories most associated with dropping out in 1987-88 are:

1) Age and TEAMS (category 12)
2) Age (category 1)
3) Age, TEAMS, and achievement (category 17)
4) Age and achievement (category 10)
5) Age and F's (category 11)

Age is common to all five categories. In 1987-88, these five categories represented 20% of at-risk students but 61.3% of the at-risk students who dropped out. In 1988-89 a category was added and the top five categories became the top six categories. See Attachment 2 Students at High Risk for Dropping Out.

In 1987-88, fewer of those students with F's dropped out than might be predicted. Eight categories including F's were represented by 17.9% of students at risk, but only 10.5% of the dropouts came from these categories. Of those with F's only, 3.5% dropped out.

In 1989-90, the local operational definition for the "F" category was modified to include not on pace towards graduation in addition to two or more F's in a semester. The total number of at-risk students declined as those students with two or more F's who were on pace towards graduation were no longer considered at risk. The eight categories

FIGURE 4
NUMBER AND PERCENT OF DROPOUTS
GRADES 7-12

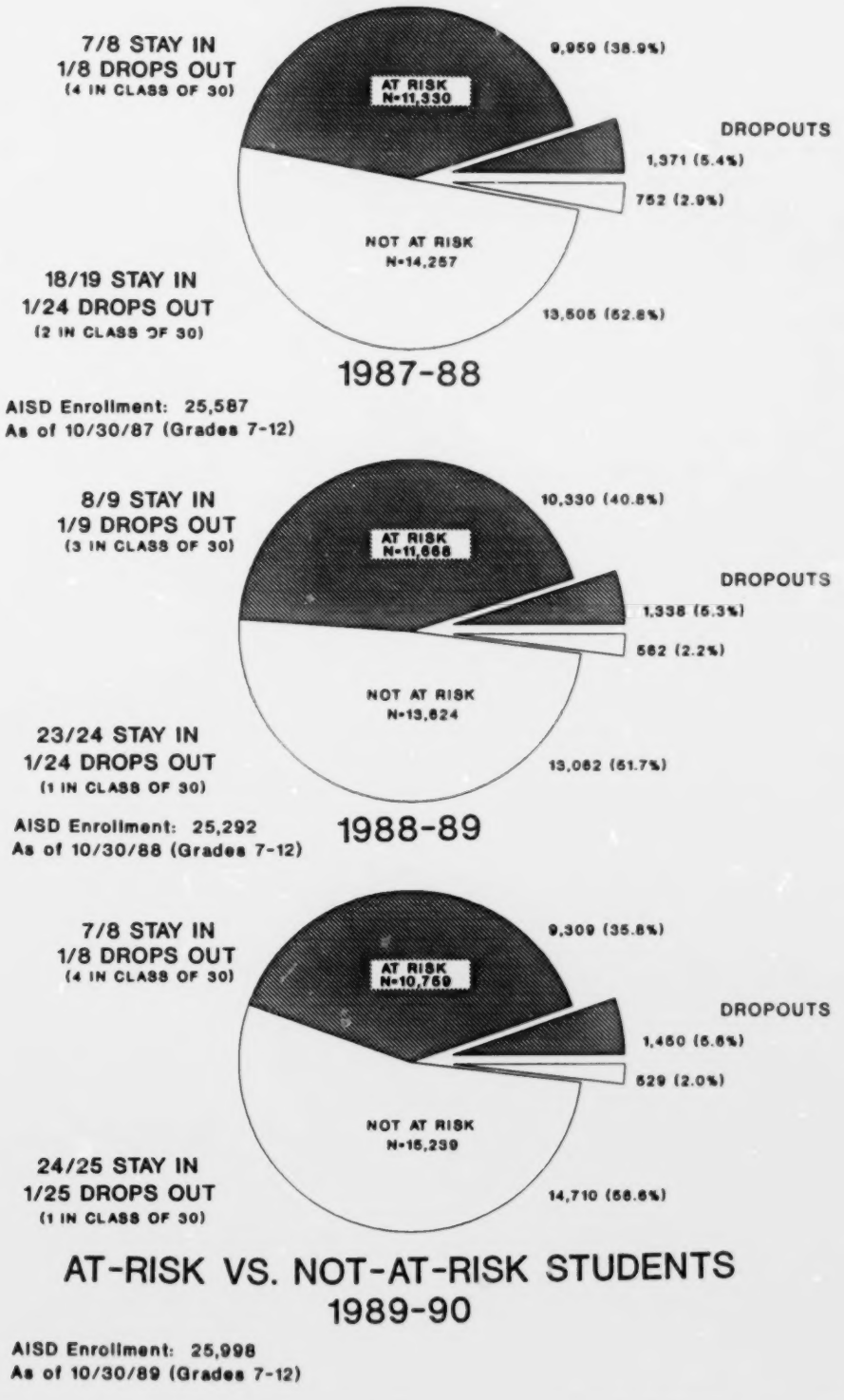
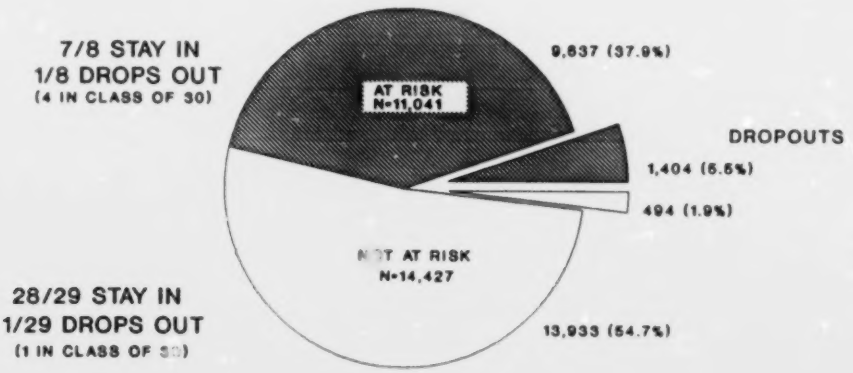


FIGURE 5
SUMMARY OF ENROLLMENT, AT-RISK STUDENTS, AND DROPOUTS

	1987-88	1988-89	1989-90	1990-91
Enrollment*	25,587	25,292	25,998	25,468
At-risk	11,330 (44.3%)	11,668 (46.1%)	10,759 (41.4%)	11,041 (43.4%)
Not-at-risk	14,257 (55.7%)	13,624 (53.9%)	15,239 (58.6%)	14,427 (56.6%)
Dropouts	2,374	2,172	2,209	2,122
At-risk	1,371 (57.8%)	1,338 (61.6%)	1,450 (65.7%)	1,404 (66.2%)
Not-at-risk	752 (31.7%)	562 (25.9%)	529 (23.9%)	494 (23.3%)
New	251 (10.5%)	272 (12.5%)	230. (10.4%)	224 (10.5%)
At-Risk Students				
Dropouts	1,371 (12.1%)	1,338 (11.5%)	1,450 (13.5%)	1,404 (12.7%)
Stay-ins	9,959 (87.9%)	10,330 (88.5%)	9,309 (86.5%)	9,637 (87.3%)
Not-At-Risk Students				
Dropouts	752 (5.3%)	562 (4.1%)	529 (3.5%)	494 (3.4%)
Stay-ins	13,505 (94.7%)	13,062 (95.9%)	14,710 (96.5%)	13,933 (96.6%)

*Enrollment is as of October 30 of each year.



AT-RISK VS. NOT-AT-RISK STUDENTS 1990-91

AISD Enrollment: 25,468
As of 10/30/90 (Grades 7-12)

including F's were now represented by 22.5% (2,416) of students at risk, and 21.6% (523) of the dropouts came from these categories. Of those at risk because of F's only, the dropout rate rose to 11.79%.

Refining the criteria for the "F" category improved its ability to predict dropouts. The number of students in the number 4 category "2 F's" dropped dramatically from 1,182 in 1988-89 to 560 in 1989-90. As a corollary, those students who had F's but were on pace towards graduation who were also at risk for other factors moved from the categories containing F's to the categories containing those other factors minus the F's.

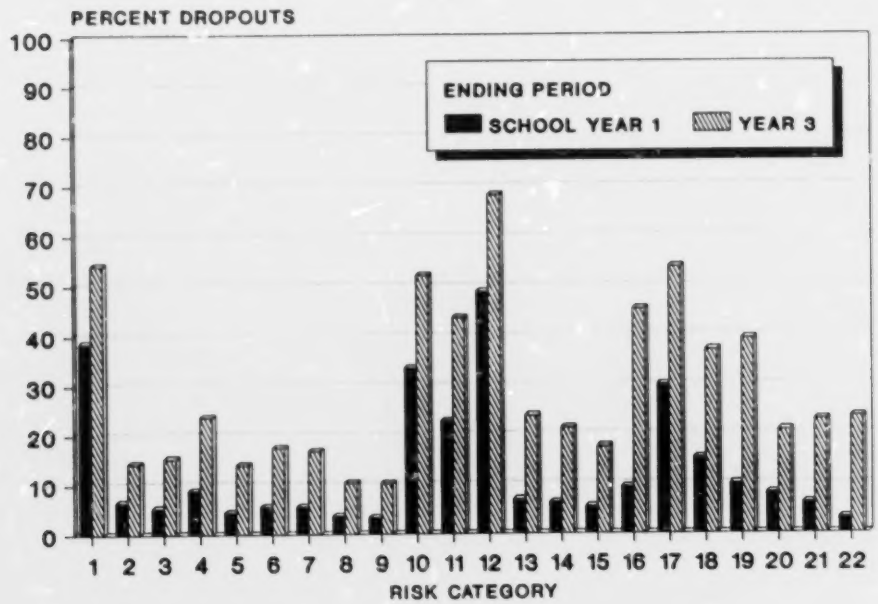
In 1990-91, a seventh category was added to the list of high-risk categories from which students drop out at the highest rates. Category 19 (Age, Ach, F's, TEAMS) has increased in each of the last four years. Category 10 (Age, Ach) and category 17 (Age, Ach,TEAMS) are now the lowest of the top seven high-risk categories. See Attachment 2.

The at-risk categories most associated with dropping out in 1990-91 are:

(1) Age, F's, TEAMS (category 18)
(2) Age and TEAMS (category 12)
(3) Age and F's (category 11)
(4) Age (category 1)
(5) Age, Ach, F's, and TEAMS (category 19)
(6) Age, Ach, and TEAMS (category 17)
(7) Age and Ach (category 10)

Comparable to the data for 1987-88, these seven categories in 1990-91 represented 26.5% of at-risk students but 63.0% of the at-risk students who dropped out.

FIGURE 6
DROPOUT RATES BY CATEGORY
GRADES 7-12, 1987-88



Are there trends in the data?

When we scan across all four years of the data in Attachment 1, we can see that the categories are still fairly consistent. The top categories for numbers of at-risk students and percent of dropouts remain the highest and the variation within each dropout as percent of risk category from one year to the next is as little as 6.38 from the lowest year to the highest year (category 12). Other than the shift in numbers in the categories as a result of refining the F criterion (discussed above), the categories remained stable for three years.

The data for the fourth year reflect stability for the categories overall in that the high categories have remained high and the low categories have remained low. There are some trends emerging that warrant discussion. In looking at numbers of at-risk students, five categories show a decline over the four years and three categories show an increase.

FIGURE 7
Categories of At-Risk Students

Decreasing	Increasing
7 TEAMS (language)	16 Age, Ach, Fs
8 TEAMS (Writing)	18 Age, Fs, TEAMS
17 Age, Ach, TEAMS	19 Age, Ach, Fs, TEAMS
21 TEAMS (2)	
22 Ach, F's, TEAMS	

The number of not-overage students who are at risk because of TEAMS has declined each of the last four years. The number of overage students at risk also from earning F's and falling off pace towards graduation has increased each of the last four years and more of these students are also dropping out.

In looking at the high-risk categories, for the first time in four years, category 12 (Age, TEAMS) is not the category with the most dropouts. Category 18 (Age, F's, TEAMS: 46.25%) emerges as the one with the highest percentage of dropouts. However, category 12 has dropped only three percentage points, from 45.75% to 42.16%, and remains fairly stable as the source of many dropouts.

FIGURE 8
Categories of Dropouts as % of Risk Category

Decreasing	Increasing
10 Age, Ach	18 Age, Fs, TEAMS
17 Age, Ach, TEAMS	19 Age, Ach, Fs, TEAMS

Category 18 has increased each of the four years; 15,22%, 20.73%, 37.70% and 46.25% respectively. This category is increasingly important as a source of dropouts.

Category 19 has also increased each of the four years; 10.00%, 10.85%, 22.25%, and 26.28% respectively. This category is playing a larger role as a source of dropouts now than four years ago.

Category 10, on the other hand, shows a decrease for each year; 38.48%, 33.33%, 24.31%, and 18.59% respectively. Category 17 also shows a decrease in the last three years. Category 10 has as its factors Age and Achievement. Category 17 has Age, Achievement, and TEAMS as factors. Category18 has Age, F's, and TEAMS. Category 19 has Age, Achievement, F's, and TEAMS. Since the percent of dropouts from category 10 is declining and the percent of dropouts from categories 18 and 19 are increasing, it is apparent that F's and TEAMS in combination with Age are becoming more important as predictors of dropping out.

The factor in common in the categories with decreasing percentages of dropouts is Achievement. Earning F's in courses, and failing TEAMS are currently more predictive of dropping out than low achievement. What has caused the change over the four years? It may be that F's awarded to students have changed and that the factor of F's has more discriminating power.

Three-Year Follow up for At-Risk Students of 1987-88

What had happened two and three years later to the first group of students identified as at risk of dropping out of school using the Texas at-risk criteria?

Of the at-risk students who had been in grades 9-12, about one third had graduated, one third were still enrolled, and slightly less than one third had dropped out. Of the at-risk students who had been in grades 7-8, two thirds were still enrolled and one fourth had dropped out.

In comparison, for the not-at-risk students in grades 9-12, more had graduated or transferred; fewer had dropped out or were still enrolled. For the not-at-risk students in grades 7-8, slightly more were still enrolled, more had transferred and fewer had dropped out. Some of the students who were not at risk in 1987-88 became at risk in 1988-89 and 1989-90. For grades 7-8, 1,057 (20.5%) became at-risk. For grades 9-12, 1,537 (16.8%) became at risk. The majority of the not-at-risk students became at-risk because of F's and overage, thus falling off-pace towards graduation.

THREE-YEAR FOLLOW-UP STUDY STATUS AT END OF THREE YEARS

FIGURE 9

GRADES 7-8, 1987-88

	At-Risk		Not At-Risk	
	N	%	N	%
Graduated	N/A	--	1	0.0
Still Enrolled	2,432	66.00	3,798	72.4
Died	--	--	2	0.0
Transferred	359	9.74	915	17.4
Dropped Out	894	24.26	530	10.0
TOTAL	3,685	100.00	5,246	100.00

FIGURE 10

GRADES 9-12, 1987-88

	At-Risk		Not At-Risk	
	N	%	N	%
Graduated	2,323	30.48	5,066	56.1
Still Enrolled	2,570	33.72	1,945	21.5
Died	7	.09	4	0.0
Transferred	649	8.52	978	10.8
Dropped Out	2,072	27.19	1,043	11.6
TOTAL	7,621	100.00	5,246	100.00

How many had dropped out from the original at-risk categories? How predictive were the at-risk categories? Were there any surprises?

Overall, the at-risk categories most associated with dropping out at the end of the sixth six weeks in 1987-88 continued to be the categories with the highest percentage of dropouts two and three years later. See Figure 6 for 22 Categories of At-Risk Students and Their Dropout Rates, 1987-88 and Figure 11 Three Year Follow-Up Study, Dropouts as of October Each Year, Grades 7-12.

GRADES 9-12

For grades 9-12 categories 12, 10, 17, 1, 16, 11, and 19 were the source of the highest percentage of dropouts at the end of three years. Categories 12, 10, 1, and 17 had been five of the five top categories at the end of the first year. The categories 16 and 19 were not top categories at the end of the first year.

For categories 1, 10, 12, and 17 the majority (67-87%) of the dropouts from the students at risk in those categories in year one dropped out the first school year. These categories all included overage

FIGURE 11
THREE- AND FOUR-YEAR FOLLOW-UP STUDY
DROPOUTS AS OF OCTOBER EACH YEAR
GRADES 7-12

CATEGORY	TOTAL 1987-88	DROP YEAR 1 N	%	DROP YEAR 2 N	%	DROP YEAR 3 N	%	DROP YEAR 4 N	%
1	1,106	505	45.7	578	52.3	600	54.2	602	54.4
2	662	59	8.9	78	11.8	94	14.2	101	15.3
3	321	33	10.3	45	14.0	49	15.3	60	18.7
4	725	84	11.6	152	21.0	171	23.6	173	23.9
5	229	10	4.4	26	11.3	32	14.0	37	16.2
6	373	29	7.8	46	12.3	65	17.4	78	20.9
7	18	3	16.7	3	16.7	3	16.7	3	16.7
8	631	34	5.4	55	8.7	65	10.3	89	14.1
9	1,242	57	4.6	99	8.0	127	10.2	143	11.5
10	215	86	40.0	108	50.2	112	52.1	110	51.2
11	163	41	25.1	64	39.3	71	43.6	74	45.4
12	374	209	55.9	237	63.4	255	68.2	258	69.0
13	189	14	7.4	43	22.7	45	23.8	50	26.5
14	2,053	165	8.0	303	14.8	437	21.3	530	25.8
15	353	19	5.4	55	15.6	62	17.6	72	20.4
16	64	8	12.5	22	34.4	29	45.3	30	46.9
17	409	146	35.7	195	47.7	220	53.8	235	57.5
18	92	18	19.6	35	38.0	34	37.0	35	38.0
19	140	16	11.4	46	32.9	55	39.3	66	47.1
20	418	48	11.5	71	17.0	87	20.8	83	19.9
21	1,070	93	8.7	169	15.8	245	22.9	306	28.6
22	459	19	4.1	90	19.6	108	23.5	126	27.5
TOTALS	11,306	1696	15.0	2,520	22.3	2,966	26.2	3261	28.8

FIGURE 12
THREE- AND FOUR-YEAR FOLLOW-UP STUDY
DROPOUTS AS OF OCTOBER EACH YEAR
GRADES 9-12

CATEGORY	TOTAL 1987-88	DROP YEAR 1 N	DROP YEAR 1 %	DROP YEAR 2 N	DROP YEAR 2 %	DROP YEAR 3 N	DROP YEAR 3 %	DROP YEAR 4 N	DROP YEAR 4 %
1	820	409	49.9	445	54.3	440	53.6	439	53.5
2	505	44	8.7	57	11.3	57	11.3	64	12.7
3	267	29	10.7	39	14.6	41	15.3	46	17.2
4	725	84	11.6	152	21.0	171	23.6	173	23.9
5	121	5	4.1	15	12.4	19	15.7	19	15.7
6	142	19	13.4	27	19.0	26	18.3	28	19.7
7	18	3	16.7	3	16.7	3	16.7	3	16.7
8	294	18	6.1	33	11.2	35	11.9	45	15.3
9	697	36	5.2	54	7.7	71	10.2	72	10.3
10	161	71	44.1	84	52.2	89	55.3	85	52.8
11	163	41	25.1	64	39.3	71	43.6	74	45.4
12	216	152	70.4	162	75.0	163	75.5	160	74.1
13	189	14	7.4	43	22.7	45	23.8	50	26.4
14	1,193	125	10.5	200	16.8	247	20.7	269	22.5
15	353	19	5.4	55	15.6	62	17.6	72	20.4
16	64	8	12.5	22	34.4	29	45.3	30	46.9
17	238	108	45.4	128	53.8	131	55.0	135	56.7
18	92	18	19.6	35	38.0	34	37.0	35	38.0
19	140	16	11.4	46	32.9	55	39.3	66	47.1
20	348	42	12.1	55	15.8	60	17.2	59	17.0
21	416	51	12.2	86	20.7	115	27.6	119	28.6
22	459	19	4.1	90	19.6	108	23.5	126	27.5
TOTALS	7,621	1,331	17.5	1,895	24.9	2,072	27.2	2169	28.5

students and did not include F's. Evidence would indicate that overage students not at risk because of making F's, with or without any additional risk factors, are at high risk of dropping out and dropping out the very year that they are identified.

For categories 16, 18, and 19, few (9-15%) of the dropouts dropped out the first year. Many additional students (48-55%) dropped out the second year. These categories included overage and F's. Evidence would indicate that overage students at risk also for F's may not drop out at high rates the first year they are identified but drop out at high rates the second year, and as seen below continue dropping out at high rates the third year.

There are only two categories with increases of more than five percentage points—categories 16 and 19—for the third year. The other categories increased slightly—less than five percentage points—in year three.

See Figure 12, Three-and Four-Year Follow-Up Study, Dropouts as of October Each Year, Grades 9-12.

GRADES 7-8

For grades 7-8, categories 12, 1, 17, 10, and 20 were the source of the highest percentage of dropouts at the end of three years. Categories 12, 1, 17, and 10 had been the top four categories at the end of the first year.

For grades 7 and 8, the number of dropouts doubled and tripled during the second and third year in some categories. These increases may have reflected the promotion of eighth graders to grade nine. Grade nine is known to be a hazardous grade with the highest percentage of at-risk students and dropouts.

Some categories such as category 12 had a high percentage of dropouts at the end of the first year and added steadily to the percentage of dropouts each year thereafter. See Figure 13, Three-and Four-Year Follow-Up Study, Dropouts as of October Each Year, Grades 7-8.

What categories were the students in when they dropped out?

Students who dropped out the first year dropped out from the category they were identified with for 1987-88. Students who dropped out in later years did not necessarily drop from the category they were identified with in 1987-88. Many students moved to other categories as they moved from level to level in school and many of the dropouts tended to come from the high risk categories.

Four-Year Follow-Up for At-Risk Students of 1987-88

What had happened four years later to the first group of students identified as at risk of dropping out of school using the Texas at-risk criteria?

Of the at-risk students who had been in grades 9-12, slightly over half had graduated, few were still enrolled, and slightly more than one quarter had dropped out. Of the at-risk students who had been in grades 7-8, slightly more than half were still enrolled and almost one third had dropped out.

In comparison, for the not-at-risk students in grades 9-12, more had graduated; fewer had transferred, dropped out, or were still enrolled. For the not-at-risk students in grades 7-8, slightly more were still enrolled, more had transferred and fewer had dropped out. Some of the students who were not at risk in 1987-88 became at risk in 1988-89 and 1989-90. For grades 7-8, 1,057 (20.5%) became at-risk. For grades 9-12, 1,537 (16.8%) became at risk. The majority of the not-at-risk students became at-risk because of F's and overage, thus falling off-pace towards graduation.

FIGURE 13
THREE- AND FOUR- YEAR FOLLOW-UP STUDY
DROPOUTS AS OF OCTOBER EACH YEAR
GRADES 7-8

CATEGORY	TOTAL 1987-88	DROP YEAR 1 N	DROP YEAR 1 %	DROP YEAR 2 N	DROP YEAR 2 %	DROP YEAR 3 N	DROP YEAR 3 %	DROP YEAR 4 N	DROP YEAR 4 %
1	286	96	33.6	133	46.5	160	55.9	163	57.0
2	157	15	9.5	21	13.4	37	23.6	37	23.6
3	54	4	7.4	6	11.1	8	14.8	14	25.9
4	N/A	---	---	---	---	---	---	---	---
5	108	5	4.6	11	10.2	13	12.0	18	16.7
6	231	10	4.3	19	8.2	39	16.9	50	21.6
7	N/A	---	---	---	---	---	---	---	---
8	337	16	4.7	22	6.5	30	8.9	44	13.1
9	545	21	3.8	45	8.3	56	10.3	71	13.0
10	54	15	27.8	24	44.4	23	42.6	25	46.3
11	N/A	---	---	---	---	---	---	---	---
12	158	57	36.1	75	47.5	92	58.2	98	62.0
13	N/A	---	---	---	---	---	---	---	---
14	860	40	4.6	103	12.0	190	22.1	261	30.3
15	N/A	---	---	---	---	---	---	---	---
16	N/A	---	---	---	---	---	---	---	---
17	171	38	22.2	67	39.2	89	52.0	100	58.5
18	N/A	---	---	---	---	---	---	---	---
19	N/A	---	---	---	---	---	---	---	---
20	70	6	8.6	16	22.9	27	38.6	24	34.3
21	654	42	6.4	83	12.7	130	19.9	187	28.6
TOTALS	3,685	367	10.0	625	17.0	894	24.3	1092	29.6

FOUR-YEAR FOLLOW-UP STUDY
STATUS AT END OF FOUR YEARS

FIGURE 14
GRADES 7-8, 1987-88

	At-Risk N	At-Risk %	Not At-Risk N	Not At-Risk %
Graduated	15	0.4	17	0.3
Still Enrolled	1947	52.9	3476	66.3
Died	0	0	6	0.1
Transferred	631	17.1	1046	20.0
Dropped Out	1092	29.6	700	13.5
TOTAL	3685	100.0	5246	100.0

FIGURE 15
GRADES 9-12, 1987-88

	At-Risk N	At-Risk %	Not At-Risk N	Not At-Risk %
Graduated	4211	55.2	6562	72.6
Still Enrolled	310	4.1	290	3.2
Died	9	0.1	4	0.0
Transferred	922	12.1	1054	11.7
Dropped Out	2169	28.5	1126	12.5
TOTAL	7621	100.0	9036	100.0

How many had dropped out from the original at-risk categories? How predictive were the at-risk categories? Were there any surprises?

Overall, the at-risk categories most associated with dropping out at the end of the sixth six weeks in 1987-88 continued to be the categories with the highest percentage of dropouts two, three, and four years later. See Figure 6 for 22 Categories of At-Risk Students and Their Dropout Rates, 1987-88 and Figure 11 Three- and Four-Year Follow-Up Study, Dropouts as of October Each Year, Grades 7-12.

GRADES 9-12

For grades 9-12, categories 1, 11, 10, 16, 17, and 19 continued to be the source of the highest percentage of dropouts at the end of four years. Categories 1, 10, 12, and 17 had been four of the five top categories at the end of the first year. The categories 16 and 19 were not top categories at the end of the first year.

For categories 1, 10, 12, and 17, the majority (90%) of the dropouts from the students at risk in those categories in year one dropped out the first year. These categories all included overage students and did not include F's. Evidence would indicate that overage students not at risk because of making F's, with or without any additional risk factors, are at high risk of dropping out and dropping out the very year that they are identified.

For categories 16, 18, and 19 few (33%) of the dropouts dropped out the first year. Many additional students (46.5%) dropped out the second year. These categories included overage and F's. Evidence would indicate that overage students at risk also for F's may not drop out at high rates the first year they are identified but drop out at high rates the second year, and as seen below continue dropping out at high rates the third year.

There are only two categories with increases of more than five percentage points—categories 16 and 19—for the third year. The other categories increased slightly—less than five percentage points—in year three.

In the fourth year, only category 19 (Age, Ach, F's, and TEAMS) increased more than four percentage points. All but two categories increased slightly in year 4. Two categories showed slight drops which may reflect students returning to school and/or receipt of documentation of transfer.

See Figure 12 Three- and Four-Year Follow-Up Study, Dropouts as of October Each Year, Grades 9-12.

GRADES 7-8

For grades 7-8, categories 1, 10, 12, 17, and 20 were the source of the highest percentage of dropouts at the end of three years and remained so at the end of four years. Categories 1, 10, 12, and 17 had been the top four categories at the end of the first year.

For grades 7 and 8, the number of dropouts doubled and tripled during the second and third year in some categories and some quadrupled by the fourth year. These increases may have reflected the promotion of eighth graders to grade nine. Grade nine is known to be a hazardous grade with the highest percentage of at-risk students and dropouts. See the report Caution: Hazardous Grade (Publication No. 90.26) for more information.

Some categories such as category 12 had a high percentage of dropouts at the end of the first year and added steadily to the percentage of dropouts each year thereafter. See Figure 13 Three and Four Year Follow-Up Study, Dropouts as of October Each Year Grades 7-8.

What categories were the students in when they dropped out?

Students who dropped out the first year dropped out from the category they were identified with for 1987-88. Students who dropped out in later years did not necessarily drop from the category they were identified with in 1987-88. Many students moved to other categories as they moved from level to level in school and many of the dropouts tended to come from the high risk categories.

CATEGORY CHANGE AND RISK CHANGE

Did students become more or less at risk as they moved from one level to the next?

The average dropout probability for all at-risk students grades 7-12 in 1987-88 was 12.10. For those students who did not return for 1988-89, the average risk rate was 16.78. For those students who did return for 1988-89, their risk rate in 1987-88 was 9.49, and the risk rate for 1988-89 was 12.33.

FIGURE 16
Risk Rates

	1987-77	1988-89	1989-90
All students	12.10		
Did not return	16.78		
Returned in 88-89	9.49	12.33	
Returned in 89-90	8.96	11.46	13.02

The average risk rate for students who returned in 1988-89 increased 2.84 points. For students who also returned in 1989-90, the average risk rate increased 2.50 points from year one to year two and increased 1.56 points from year two to year three.

The evidence suggests that the lower the risk in year one, the more likely the student is to be in school two and three years later. The higher the risk is in year one the more likely he is not to return for the following year. The evidence also suggests that students who are identified as at risk become more at risk as they move from level to level.

USE OF AT-RISK CRITERIA

In AISD, the at-risk criteria have been used to identify students for placement in dropout prevention programs and enrollment in courses designed for at-risk students. ORE has used the at-risk criteria in research to predict dropping out and to evaluate the effectiveness of dropout-prevention programs. See Comparing Actual and Predicted Dropout Rates to Evaluate Program Effectiveness (Publication No. 90.19) and Effectiveness of Dropout Prevention Programs (Publication No. 90.44).

The State-mandated criteria overidentify at-risk students. There are more students identified as at risk than the schools can effectively target. The criteria have been refined and used to identify those students as high risk of dropping out, so efforts may be targeted to them.

The at-risk criteria have also been used in a study to determine whether all at-risk students are being served by either dropout prevention programs or courses designed for at-risk students. We have looked at the match of students to programs to determine whether all groups of at-risk students are being served or are being partially served.

MAKING THE CRITERIA MORE EFFECTIVE

How can the criteria or at-risk categories be made more effective in predicting dropouts?

The criteria do not currently include grade point average (GPA), percent of attendance, number of discipline incidents, any measure of newness to the District, or weight for previously dropping out of school. These factors are all known to have some predictive value in predicting dropouts and are available to most school districts. Adding some of these criteria may increase our predictability of dropouts. However, because of multicollinearity, adding the above criteria may not increase our predictability.

Additional factors which are alleged to contribute to dropping out—such as pregnancy, single parent, parent was a dropout—are not available to most districts. It is not possible for us at this time to assess their usefulness.

EDUCATIONAL IMPORTANCE OF THE STUDY

School districts nationwide face the problem of dropouts and how to decrease the dropout rate. Our nation's well-being may depend on how well we solve the problem. This study provides information on the variables used in identifying at-risk students and follow-up of differential dropout rates. More importantly, it offers new data on a four-year follow-up of implementation of State-mandated at-risk criteria.

REFERENCES

Frazer, L. (1991, April). At -Risk Students Three Years Later: We Know Which Ones Will Drop Out. (Publication No. 90.16). Paper presented at the American Educational Research Association 1991 annual meeting, Chicago, IL.

Frazer, L. and Ligon, G. (1991). Comparing Actual and Predicted Dropout Rates to Evaluate Program Effectiveness.(Publication No. 90.19).Paper presented at the American Educational Research Association 1991 annual meeting, Chicago, IL.

Frazer, L., Nichols, T., and Wilkinson, D. (1991). History of Dropout-Prevention Events in AISD. (Publication No. 90.42). Austin, TX: Austin Independent School District, Office of Research and Evaluation.

Frazer, L and Nichols, T. (1991). 1990-91 At-Risk Report. (Publication No. 90.41). Austin, TX: Austin Independent School District, Office of Research and Evaluation.

Frazer, L. and Nichols, T. (1991). Effectiveness of Dropout Prevention Programs. (Publication No. 90.44). Austin, TX: Austin Independent School District, Office of Research and Evaluation.

Frazer, L. (1990). 1989-90 Dropout Report. Publication No. 90.12) Austin, TX: Austin Independent School District, Office fo Research and Evaluation.

Frazer, L. and Wilkinson, D. (1990). At-Risk Students: Do We Know Which Ones Will Drop Out? (Publication No. 89.24). Paper presented at the American Educational Research Association 1990 annual meeting, Boston, MA

Paredes, V. (1991) Caution: Hazardous Grade. (Publication No. 90.26). Austin, TX: Austin Independent School District, Office of Research and Evaluation.

DROPOUTS AS A FUNCTION OF AT-RISK STATUS
SCHOOL YEAR DROPOUTS, 1987-88 THROUGH 1990-91
GRADES 7-12, END OF YEAR

	At-Risk Students				Dropouts*				Dropouts as % of Risk Category			
	1987-88	1988-89	1989-90	1990-91	1987-88	1988-89	1989-90	1990-91	1987-88	1988-89	1989-90	1990-91
1	1,113	941	1,021	906	426	361	310	251	38.27	38.36	30.36	27.70
2	662	555	770	854	43	45	28	28	6.50	8.11	3.64	3.28
3	321	214	327	538	17	15	12	16	5.29	7.01	3.67	2.97
4	726	1,182	560	552	64	41	66	69	8.82	3.47	11.79	12.50
5	229	301	244	220	10	16	13	5	4.37	5.32	5.33	2.27
6	374	336	257	207	21	31	17	9	5.61	9.23	6.61	4.35
7	18	16	4	5	1	2	0	2	5.56	12.50	0.00	40.00
8	632	523	500	433	23	21	17	14	3.64	4.02	3.40	3.23
9	1,246	1,258	903	896	41	48	24	27	3.30	3.82	2.66	3.01
10	215	180	218	199	72	60	53	37	33.48	33.33	24.31	18.59
11	163	296	387	579	37	48	127	187	22.70	16.22	32.82	32.30
12	377	369	365	268	183	167	167	113	48.54	45.26	45.75	42.16
13	189	366	232	250	13	11	35	36	6.88	3.01	15.09	14.40
14	2,054	2,033	2,137	2,202	130	156	103	107	6.33	7.67	4.82	4.86
15	354	442	276	271	19	18	43	41	5.37	4.07	15.58	15.13
16	64	84	137	226	6	4	33	47	9.98	4.76	24.09	20.80
17	410	355	335	272	123	125	98	52	30.00	35.21	29.25	19.12
18	92	164	252	307	14	34	95	142	15.22	20.73	37.70	46.25
19	140	212	346	392	14	23	77	103	10.00	10.85	22.25	26.28
20	418	234	446	570	34	20	30	20	8.13	8.55	6.73	3.51
21	1,074	986	679	533	66	79	55	60	6.15	8.01	8.10	11.26
22	459	363	363	361	14	13	47	38	3.05	2.09	12.95	10.53
Total	11,330	11,668	10,759	11,041	1,371	1,338	1,450	1,404	12.10	11.47	13.48	12.72

* Total 1987-88 dropouts = 2,374; therefore, 1,003 (42.2%) not identified as at risk.
Total 1988-89 dropouts = 2,172; therefore, 834 (38.4%) not identified as at risk.
Total 1989-90 dropouts = 2,209; therefore, 759 (34.4%) not identified as at risk.
Total 1990-91 dropouts = 2,122; therefore, 718 (33.8%) not identified as at risk.

ATTACHMENT 2
STUDENTS AT HIGH RISK FOR DROPPING OUT

The categories are as follows:		Percent of at-risk students in these categories who dropped out in 1987-88	in 1988-89	in 1989-90	in 1990-91
Age	Student is two or more years older than expeccted for the grade level.	38.27%	38.36%	30.36%	27.70%
Age, Read Ach or Math Ach	Student is two or more years older than expected for the grade level and scored two or more years below grade level in reading or mathematics on the ITBS or TAP.	38.48%	33.33%	24.31%	18.59%
Age, 2 F's	Student is two or more years older than expected for the grade level and failed at least two courses during a semester.	22.70%	16.22%	32.82%	32.30%
Age, TEAMS (any)	Student is two or more years older than expected for the grade level and failed at least one of the sections of the TEAMS.	48.54%	45.26%	45.75%	42.16%
Age, Math Ach or Reading Ach and TEAMS (any)	Student is two or more years older than expected for the grade level, scored two or more years below grade level in mathematics or reading on the ITBS or the TAP, and failed at least one of the sections of the TEAMS.	30.00%	35.21%	29.25%	19.12%
Age, 2 F's, TEAMS (any)	Student is two or more years older than expected for the grade level, failed at least two courses during a semester, and failed at least one of the sections of the TEAMS.	15.22%	20.73%	37.70%	46.25%
Age, Math Ach, or Read Ach, 2 F's, and TEAMS (any)	Student is two or more years older than expected for the grade level, scored two or more years below grade level in mathematics or reading on the ITBS or the TAP, failed at least two courses during a semester, and failed at least one of the sections of the TEAMS.	10.00%	10.85%	22.25%	26.28%

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